

**B. Sites Discovered during Construction**

Work for solid waste removal sites discovered during construction is measured according to Subsection 109.05, “Extra Work.”

**C. Overexcavation of Solid Waste**

Overexcavating solid waste to depths below those shown on the Plans is measured by the cubic yard (meter). Volume calculations are described in Subsection 215.4.A, “Sites Shown on the Plans.”

**215.5 Payment**

Work performed under this Item will be paid for as follows:

**A. Sites Shown on the Plans**

Removing solid waste from sites shown on the Plans will be paid for at the Contract Unit Price bid per cubic yard (meter). This is full compensation for excavating the solid waste material; hauling and properly disposing of the hazardous materials; closing the remaining landfill site; constructing necessary haul roads; furnishing chemicals and spraying the removal site, trucks, and contents as required; disposing at a permitted municipal solid waste landfill; and providing fencing, labor, equipment, tools, direction, and incidentals necessary to complete the Item.

**B. Sites Discovered during Construction**

Removing solid waste from sites discovered during construction will be paid for according to Subsection 109.05.

**C. Overexcavation of Solid Waste**

When the Engineer requires removal of solid waste beyond the limits shown on the Plans, payment for removal and disposal will be as follows:

1. Solid waste removed from within the neat cross sections shown on the Plans, and to the depth of 3 ft (1 m) below those cross sections, will be paid for at the Unit Price bid per cubic yard (meter) for removing solid waste.
2. Solid waste removed to depths below the 3 ft (1 m) specified above will be paid for as follows:

- a. Over 3 ft (1 m) but not over 10 ft (3 m) deep:

This material will be paid for at the rate of 110 percent of the Unit Price bid per cubic yard (meter) for that portion of the material over 3 ft (1 m) but not over 10 ft (3 m) of extra depth.

- b. More than 10 ft (3 m) deep:

If the extra depth exceeds 10 ft (3 m), stop work in that area. The Engineer will request an investigation by the Office of Materials and Research.

If necessary to excavate below the 10 ft (3 m) level, do not resume work until a satisfactory plan for payment has been established.

Payment will be made under:

Item No. 215	Removal of solid waste	Per cubic yard (meter)
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**215.5.01 Adjustments**

General Provisions 101 through 150.

**Section 216—Unpaved Shoulders****216.1 General Description**

This work includes constructing unpaved shoulders.

**216.1.01 Definitions**

General Provisions 101 through 150.

**216.1.02 Related References****A. Standard Specifications**

Section 106—Control of Materials

### 216.1.03

Section 205—Roadway Excavation

Section 210—Grading Complete

Section 817—Shoulder Material

#### **B. Referenced Documents**

GDT 7

GDT 20

GDT 21

GDT 24a

GDT 59

GDT 67

#### **216.1.03 Submittals**

General Provisions 101 through 150.

### **216.2 Materials**

Unless otherwise specified in the Proposal, ensure that the material conforms to Section 817. The provisions of Section 106 apply to shoulder materials obtained from sources off the Right-of-Way.

#### **216.2.01 Delivery, Storage, and Handling**

General Provisions 101 through 150.

### **216.3 Construction Requirements**

#### **216.3.01 Personnel**

General Provisions 101 through 150.

#### **216.3.02 Equipment**

Before beginning shoulder construction, have the required equipment on the Project and in good working condition. Use equipment approved by the Engineer. The Engineer will not permit tractors with treads or equipment that damage existing base, surfacing, or pavement.

#### **216.3.03 Preparation**

General Provisions 101 through 150.

#### **216.3.04 Fabrication**

General Provisions 101 through 150.

#### **216.3.05 Construction**

##### **A. General**

Shape and compact shoulders in sequence as required for the type of base or pavement being constructed. Promptly repair damage to an existing base, surface, or pavement due to shoulder construction. Repairs are to be made at no expense to the Department.

##### **B. Compaction**

Immediately compact shoulders as follows to reduce erosion:

###### **1. Grassed Shoulders**

Compact shoulder areas above subgrade elevation that require grassing or sodding to a firm and stable condition as determined by the Engineer.

###### **2. Ungrassed Shoulders**

Ensure that ungrassed shoulder areas (including ungrassed stabilized shoulders and paved shoulders) have a resultant density of at least 100 percent of the maximum laboratory dry density. The density is determined from compacted representative samples of the material using GDT 7, GDT 67, or GDT 24a, whichever applies. The in-place density of the compacted shoulder will be determined according to GDT 20, GDT 21, or GDT 59, whichever applies.

### 3. All Shoulders

Compact shoulders adjacent to a flexible base at least 18 in (450 mm) wider on each side along with the base course.

## C. Maintenance

Maintain shoulders as follows:

1. Cut weep holes through shoulders constructed prior to flexible bases to prevent impoundment of water on the road-bed or subgrade.
2. Provide adequate temporary drainage facilities to prevent excessive erosion when front slopes are subject to concentrated water at weep holes.
3. Promptly repair excessive erosion to prevent damage to the adjacent base or pavement.
4. Repair and dress adjacent slopes and remove excess material from adjacent ditches when shaping, dressing, and compacting shoulders.

## D. Construction Sequence

Construct unpaved shoulders as follows:

### 1. Portland Cement Concrete Bases and Pavements

Construct, shape, and compact the shoulders as soon as the curing period is complete on each section.

### 2. Hot Mix Asphaltic Concrete Pavement

Construct shoulders adjacent to hot mix asphaltic concrete pavement according to the following case scenarios:

#### a. Hot Mix Asphaltic Concrete Bases

Construct, shape, and compact the shoulders as soon as the final rolling is complete on each section.

#### b. Hot Mix Asphaltic Concrete Intermediate and Surface Courses

Place the shoulder material for the underlying base course and compact it before beginning the intermediate or surface course. Place, shape, and compact the remaining shoulder material after completing the final rolling of each section of surface course.

### 3. Flexible Bases or Pavements (except those listed under Subsection 216.3.05.D.2.a and Subsection 216.3.05.D.2.b)

Follow these requirements except when constructing shoulders and base courses of the same materials:

- a. Before constructing the base or pavement, place loose shoulder material to construct the compacted width of shoulder shown on the Plans.  
Place the loose shoulder material at a proper distance outside the proposed edge of base or pavement.
- b. After initially manipulating and compacting the base or paving material, use the blade grader to pull the shoulder up to, but not inside of, the proposed edge of the base or pavement.
- c. When constructing multiple courses, construct the shoulders, base, or pavement using the same number of courses. Prevent excessive erosion from concentrated water at weep holes by keeping the distance from the base or pavement construction to the shoulder construction to a minimum. Move smoothly and efficiently between the two operations.

### 4. Stabilized Shoulders

When the Plans or Proposal call for stabilized shoulders, add the stabilizer according to the Specification pertaining to that Item.

### 5. Shoulders Constructed with Base Material

When constructing shoulders and base courses out of the same materials, place and construct the shoulder material in the same way as the base material.

### 6. Shoulders Constructed under Traffic

When constructing shoulders on highways that are open to traffic, use the following construction operations:

#### a. Removing Existing Shoulder Materials

Do not remove existing shoulders or portions of existing shoulders more than 1,500 ft (450 m) ahead of paving operations. Also, comply with this limitation when constructing new shoulders and paving is not involved.

#### b. Constructing Shoulders

Complete and compact shoulders within a distance of 1,500 ft (450 m) or less behind finished paving operations.

216.3.06

c. Enforcing Construction Limitations

When trenching out or rebuilding the shoulders on opposite sides of the pavement simultaneously, separate the two operations by at least 1 mile (1600 m), leaving at least one usable shoulder to protect passing traffic.

**216.3.06 Quality Acceptance**

General Provisions 101 through 150.

**216.3.07 Contractor Warranty and Maintenance**

General Provisions 101 through 150.

**216.4 Measurement**

**A. Materials Obtained from Roadbed**

Shoulders constructed from material obtained from adjacent portions of the roadbed are measured according to Subsection 205.4, "Measurement" or Subsection 210.4, "Measurement," as applicable.

**B. Shoulders Adjacent to Stabilized Bases**

When bases are constructed by stabilizing the existing roadbed, and the shoulders are to be bladed into section using materials from the existing roadbed, no measurement of shoulder materials will be made.

**C. Shoulders Constructed with New Base Course Materials**

New shoulders constructed of the same material as the new base course by spreading the base course material full width of the roadbed is measured for payment according to the appropriate Specification for the type base course.

**D. Shoulders Constructed with Selected Shoulder Material**

Selected shoulder material, including accepted pervious and impervious shoulder material obtained from pits or other sources off the Right-of-Way, is measured in cubic yards (meters) loose volume in vehicles when dumping.

**216.4.01 Limits**

General Provisions 101 through 150.

**216.5 Payment**

**A. Shoulders Constructed with Materials Obtained from Existing Roadbed**

Measured shoulder material obtained from the existing roadbed will be paid at the Contract Unit Price per cubic yard (meter) for Section 205.

Shoulders constructed out of existing roadway materials including selected borrow already in position from prior construction operations, will not be paid for separately. Payment for these materials will be made under the pertinent items required to place these materials in position.

**B. Shoulders Constructed with New Base Course Materials**

Shoulders constructed from new base course materials will be paid for according to the appropriate Specifications for the type of base course.

**C. Shoulders Constructed with Selected Shoulder Material**

Selected shoulder material, including accepted pervious and impervious shoulder material obtained from pits or other sources off the Right-of-Way, will be paid for at the Contract Unit Price per cubic yard (meter) or square yard (meter) of a specified thickness. Payment is full compensation for furnishing the material when specified and for performing construction, compaction, and other work specified in this Section pertaining to the Item.

If under the provisions of Section 106 the Contractor shall pay royalties for the selected shoulder material, the Pay Item is listed with the words "Including Material" added.

Payment will be made under:

Item No. 216	Selected material for shoulder construction	Per cubic yard (meter) or square yard (meter), ____ in (mm) average thickness
Item No. 216	Selected material for shoulder construction including material	Per cubic yard (meter) or square yard (meter), ____ in (mm) average thickness

**216.5.01 Adjustments**

General Provisions 101 through 150.

## **Section 217—Removal of Underground Storage Tanks**

**217.1 General Description**

This work includes excavating, removing, and disposing of underground storage tank (UST) systems discovered during construction or shown on the Plans.

Remove materials according to this Specification, Plan details, and as directed by the Engineer.

**217.1.01 Definitions**

Underground storage tank system: A tank with at least 10 percent of its volume underground, including the pipes and pumps connected to the tank. The tanks may be used to store petroleum products or hazardous chemicals. Tanks used for the following are specifically excluded from Georgia EPD Rules (Chapter 391-3-15) and EPA regulation 40 CFR Part 280:

- Farm or residential tanks of 1100 gal (4160 L) or less capacity used for storing motor fuel for noncommercial uses
- Tanks used for storing heating oil for consumptive use of the premises where stored
- Pipeline facilities

Remove tanks excluded from Georgia EPD Rules (Chapter 391-3-15) and EPA regulation 40 CFR Part 280 according to the American Petroleum Institute's Recommended Practice 1604 (API 1604).

**217.1.02 Related References****A. Standard Specifications**

Section 107—Legal Regulations and Responsibility to the Public

Section 109—Measurement and Payment

Section 208—Embankments

**B. Referenced Documents**

Georgia EPD Rules (Chapter 391-3-15)

EPA regulation 40 CFR Part 280

American Petroleum Institute's Recommended Practice 1604 (API 1604)

**217.1.03 Submittals****A. UST Systems Shown on the Plans**

Submit documentation of proper disposal to the Engineer no later than the day following disposal.

Submit the soil or water samples to a laboratory approved by the Engineer for testing.

Submit to the Engineer a completed test report, sketch, and certification that the tests were performed according to EPD rules. Submit the documentation within 30 days after the date the samples were taken.

**217.2 Materials****A. Soil Backfill**

To backfill a UST removal site, use earth materials approved by the Engineer.

**B. Hazardous Materials**

Handle materials classified as hazardous according to Subsection 107.22, "Hazardous and/or Toxic Waste."

**217.2.01 Delivery, Storage, and Handling**

General Provisions 101 through 150.